DEVICES FOR COLLECTING BLOOD AND ADMINISTERING MEDICAL FLUIDS

Abstract of the Disclosure

Novel devices which can be used to both collect blood samples from and administer medical fluids to a patient on a repeated and continual basis using one rather than multiple needle insertions. The devices are capable of removing blood from one of the patient's veins using the intrinsic venous pressure of the blood and capillary action of the device, thereby preventing vacuum-induced collapse of the vein. The device typically includes a main tubing segment confluently connected to a cannula for insertion in the patient's vein. A syringe port and a volumeter for collecting blood branch separately from the main tubing segment. The device is used to collect blood by attaching an empty blood collection syringe to the syringe port, inserting the cannula in the patient's vein, allowing passive flow of blood from the main tubing segment into the volumeter under intrinsic venous blood pressure and capillary action, and then facilitating active flow of blood from the volumeter into the blood collection syringe by extending the syringe plunger. The blood-filled syringe may be replaced by additional empty blood collection syringes and the procedure repeated, as needed, depending on the quantity of blood to be obtained. The device may be used to administer medical fluids to the patient by first removing the residual blood from the main tubing segment and volumeter, flushing the main tubing segment with sterile normal saline and administering the fluids to the patient through the main tubing segment from a medical fluid syringe or catheter attached to the syringe port.